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09/537,659	03/29/2000	Krishna Murthy	199-1255	5957	
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SUITE 600		2123	1/		
TROY, MI 48084			DATE MAILED: 02/20/2004		

Please find below and/or attached an Office communication concerning this application or proceeding.

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		Applicati n N .		Applicant(s)				
Office Action Summary		09/537,659		MURTHY ET AL.				
		Examin r	-	Art Unit				
		Eduardo Garcia-O	tero	2123				
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Status								
1)⊠ R	Responsive to communication(s) filed on 12	January 2004.						
2a)⊠ T	his action is FINAL . 2b)☐ TI	nis action is non-final.						
	Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.							
Dispositio	n of Claims							
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DETAILED ACTION: Final Action

Introduction

- 1. Title is: METHOD OF PRODUCT INTEGRATED MANAGEMENT WITH VEHICLE DESIGN.
- 2. First named inventor is: MURTHY
- 3. Claims 1-16 have been submitted, examined, and rejected.
- 4. US Application was filed 3/29/00, and no claim was made for earlier priority.
- 5. Applicant's response to the first office action was received 1/12/04. No amendments were made to the specification or claims or drawings.

Index of Prior Art

- 6. **Time-Life Artificial Intelligence** refers to Artificial Intelligence (Understanding Computers), by Time-Life Books, 1986, ISBN 0-8094-5675-3, pages 36-43.
- 7. **Juran** refers to Juran on Quality by Design, by J. M. Juran, The Free Press, 1992, ISBN 0-02-916683-7, pages 406-427, and 462-467.
- 8. **Tucker** refers to The Computer Science and Engineering Handbook, by Allen B. Tucker, CRC Press, ISBN: 0-8493-2909-4, 1996, page 1954.

Definitions

- 9. **Webster** refers to Merriam-Webster's Collegiate Dictionary, Tenth Edition, Merriam-Webster, 2000, ISBN 0-87779-708-0.
- 10. **IEEE Dictionary** refers to The Authoritative Dictionary of IEEE Standards and Terms, Seventh Edition, by IEEE Press, ISBN 0-7381-2601-2, 2000.
- Microsoft Dictionary refers to Microsoft Computer Dictionary, Fourth Edition, by Microsoft Press, JoAnne Woodcock as Senior Contributor, ISBN 0-7356-0615-3, May 1999.

12. Applicant's Remarks

- 13. 35 USC 112 WRITTEN DESCRIPTION AND ENABLEMENT AND INDEFINITENESS. Applicant cites and discusses the specification: page 14 line 13 to page 15 line 2, page 15 lines 12-26, page 16 lines 3-6, page 14 line 13 to page 15 line 2, page 15 lines 12-26, and page 16 lines 3-6. Applicant's assertions based upon the specification are unpersuasive.
- 14. As discussed in the prior office action, Applicant's claimed invention appears to be an expert system. However, such expert systems require substantial sets of rules. For example, the

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Cambell's sterilizer expert system required 150 "rules of thumb", which took 14 man-months to document (see Time-Life Artificial Intelligence page 41). The medical expert system MYCIN required "some 500 if-then rules" (see Time-Life Artificial Intelligence page 40). Thus, in view of these example expert systems, Applicant's assertions based upon the specification are not persuasive.

- 15. CLAIM INTERPRETATION. Applicant clarifies the intent of claim 2. The claim interpretation is amended accordingly, see below.
- 16. Claim 2 presently states, "selecting additional information for determining if the information from the information database correlates with the program requirement, if the information from the information database does not correlate with the program requirement".
- 17. Based upon Applicant's remarks at page 11, the Applicant's intent appears to be approximately: "selecting additional information (from a second information database) for determining if the (additional) information from the (second) information database correlates with the program requirement, if the information from the (first) information database does not correlate with the program requirement". Note that there appears to be substantial ambiguity in the present terminology regarding the databases. Further note that said present claim 2 terminology appears to be an "if-then" type rule (conditional limitation) written in the unclear form "then-if". Please amend appropriately.
- 18. 35 USC 103 REJECTIONS. Applicant asserts that claim 1 "library" is not disclosed by Juran page 407 "data base". The terms "library" and "data base" do not appear to be have any patentable distinction, in the context of the specification and Juran.
- 19. Applicant further asserts that claim 1 "stored in the memory of a computer system, where the library is accessed through an information portal on the computer system" is not disclosed by Tucker page 1954 "The World Wide Web (WWW) is the fastest growing protocol on the Internet". The IEEE Dictionary defines "portal" as "The logical point at which medium access control (MAC) service data units (MSDUs) from a non-IEEE 802.11 local area network (LAN) enter the distribution system (DS) of an extended service set (ESS)." This IEEE definition does not appear to be intended.

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- 20. Microsoft Computer Dictionary defines "portal" as "A Web site that serves as a gateway to the Internet. A portal is a collection of links, content, and services designed to guide users to information they are likely to find interesting-news, weather entertainment, commerce sites, chat rooms, and so on. Yahoo!, Excite, MSN.com, and Netscape NetCenter are examples of portals." This Microsoft definition appears correct in view of the context.
- 21. The Examiner interprets the claim 1 term "computer system" as an internet system, and interprets "portal" per Microsoft Computer Dictionary.
- 22. Possibly the Applicant intends to use the term "information portal" in a more broad and general sense, for example as merely a graphical user interface facilitating access to a computer's database, and possibly not requiring a network. However, the use of the term "computer system" in the context of the term "portal" appears to indicate computer networks such as the Internet.
- 23. MOTIVATION. Applicant asserts that there is no motivation in the art to combine Juran and Tucker together. However, MPEP 706(j) states "there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings... To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." Emphasis added. Citing Ex parte Clapp, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985). See also MPEP § 2144 § 2144.09 for examples of reasoning supporting obviousness rejections.
- 24. Thus, motivation in the art is not mandatory.
- 25. The Examiner's line of reasoning is convincing, and is repeated here for convenience: At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use Tucker's "Internet" to modify Juran's quality methods in order to inexpensively store large amounts of data, and to allow instant and simultaneous access to the data from multiple computers (or "information portals").
- 26. In summary, the claim interpretation has been amended in view of Applicant's remarks, but all rejections are maintained and repeated below.

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Knowledge based expert systems

27. As a preface to the 35 USC 112 rejections, it appears useful to review three examples of knowledge based expert systems, as well as the relevant cases and burdens.

- 28. DEFINITION. The claimed invention appears to be a relatively low-level expert system. An "expert system" is defined by Microsoft Computer Dictionary as "An application program that makes decisions or solves problems in a particular field, such as finance or medicine, by using knowledge and analytical rules defined by experts in the field. It uses two components, a knowledge base and an inference engine, to form conclusions... See also artificial intelligence, inference engine, intelligent database, knowledge base."
- 29. THREE EXAMPLES. The complexity of early expert systems is discussed by Time-Life Artificial Intelligence (copyright 1986) at page 40 "With considerable help and encouragement from Feigenbaum and his colleague Bruce Buchanan, another Stanford research scientist, Shortliffe devised an expert system dubbed MYCIN. Armed with some 500 if-then rules for diagnosing meningitis and blood infections and recommending antibiotic therapies".
- 30. A second expert system is discussed at page 41, "CADUCEUS-which was named for the traditional winged-staff-and-serpent symbol of physicians-began in the early 1970s. Its goal is to encompass the essential diagnostic knowledge of some 700 diseases. With Jack Meyers serving as an important source of the system's expertise, it is perhaps unsurprising that CADUCEUS acquired the nickname Jack-in-the-Box.... Systems such as CADUCEUS are severely limited by the size of their knowledge bases."
- 31. A third expert system is discussed at page 41, "Aldo Cimino... expert in maintaining the complex sterilizers, or "cookers," used for killing bacteria in canned soup... spent about seven months with Michael Smith, a so called knowledge engineer-a computer scientist who tries to reduce complex subjects to the if-then formant that can be processed by an expert system ... more than 150 rules of thumb to aid the operators of Cambell's sterilizers". Note that two experts spent seven months (or 14 man-months, or more than 1 man-year) to generate 150 if-then rules. Additionally, note that designing a modern vehicle appears substantially more complex than making a can of soup.

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32. LEGAL PRECEDENT. For the record, note two useful cases regarding enablement. White Consolidated Industries, Inc. v. Vega Servo-Control Inc. (CAFC) 218 USPQ 961, 963 (7/25/83) addresses software enablement and states "The amount of required experimentation, however, must be reasonable" and "in this case that development of a single pass language translator would require from 1-1/2 to 2 manyears of effort, a clearly unreasonable requirement".

- 33. Also note that *In re Wands* (CA FC) 8 USPQ2d 1400, 1404 (9/30/1998) provides an 8 factor test for determining undue experimentation: "Factors to be considered in determining whether a disclosure would require undue experimentation...includes (1) the quantity of experimentation necessary, (2) the amount of direction or guidance presented, (3) the presence or absence of working examples, (4) the nature of the invention, (5) the state of the prior art, (6) the relative skill of those in the art, (7) the predictability or unpredictability of the art, and (8) the breadth of the claims".
- 34. MPEP BURDENS. Examiner bears "the initial burden to establish a reasonable basis to question the enablement" according to MPEP 2164.04. The burden then shifts to the Applicant to "present persuasive arguments, supported by suitable proofs where necessary", see MPEP § 2164.05. The standard for the Applicant's arguments is "convincing to one skilled in the art", see MPEP § 2164.05.

Claim Rejections - 35 USC § 112- first paragraph- enablement

- 35. The following is a quotation of the first paragraph of 35 U.S.C. 112: The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
- 36. Claims 1-16 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.
- 37. Claim 1 states "selecting a vehicle program requirement from a library". The specification page 3 line 11 does not adequately describe "requirement", and merely states "The method includes the steps of selecting a vehicle program requirement from a library

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stored in a memory of a computer system". Similarly, specification page 6 line 11 broadly states "The knowledge-based engineering library 112 may include information such as design, assembly and manufacturing rules and guidelines... various types of vehicle subsystems... predetermined product assumptions regarding the vehicle 10 to be designed, such as model year, style, or production volume... sub-library, such as a component parts library".

- 38. Thus, said "library" appears to include "manufacturing rules and guidelines", and said library is not enabled in view of the above expert system examples.
- 39. Claim 1 states "using the information... if the information from the information database correlates with the program requirement". Correlate is defined by Webster as "the bear reciprocal or mutual relations... to present or set forth so as to show relationship". There is not adequate description in the specification of how to correlate, nor is there any clear definition of "vehicle program requirement". Note that specification page 16 merely states "the user 126 determines if a portion of the information from the information database correlates". Thus, the term "correlates" appears to be an "expert system" function, of the type discussed in the examples above, and is not enabled.
- 40. Thus, "correlate" is not enabled in view of the above expert system examples.
- 41. Claim 1 states "using the information from the information database in the design of the vehicle". There is not adequate description in the specification of how to use the information. Thus "using the information" is not enabled in view of the above expert system examples.
- 42. Claims 2-16 are not enabled for the same reasons as claim 1.
- 43. Claim 11 states "determining through the information portal if a condition is known by which the verification information was generated, if a portion of the verification information correlates with the program requirement". There is not adequate discussion in the specification of the terms "determining", and "condition", and "verification information". Thus claim 11 is not enabled in view of the above expert system examples.

35 USC § 112- first paragraph-written description

44. The following is a quotation of the first paragraph of 35 U.S.C. 112: The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and

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exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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- 45. Claim 1-16 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the disclosure in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.
- 46. Claims 1-16 are rejected for lack of written description for the same reasons as the lack of enablement rejections above.

35 USC § 112-Second Paragraph-indefinite claims

- 47. The following is a quotation of the second paragraph of 35 U.S.C. 112: The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
- 48. Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
- 49. Claims 1-16 are rejected for indefiniteness for the same reasons as the lack of enablement rejections above.

Claim Interpretation-revised per Applicant's remarks

- 50. The claim language is interpreted in light of the specification. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).
- 51. In claim 2, "selecting additional information for determining if the information from the information database correlates with the program requirement, if the information from the information database does not correlate with the program requirement" is interpreted as "selecting additional information (from a second information database) for determining if the (additional) information from the (second) information database correlates with the program requirement, if the information from the (first) information database does not correlate with the program requirement". This interpretation is based upon Applicant's Remarks page 11. Please amend appropriately.

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Claim Rejections - 35 USC § 103

52. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action: (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

- 53. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows: Determining the scope and contents of the prior art. Ascertaining the differences between the prior art and the claims at issue. Resolving the level of ordinary skill in the pertinent art. Considering objective evidence present in the application indicating obviousness or nonobviousness.
- 54. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable.
- 55. <u>Claim 1 is rejected</u> under 35 U.S.C. 103(a) as being unpatentable over Juran in view of Tucker.
- 56. Claim 1 is an independent "method" claim with 6 limitations, labeled A-F by the Examiner for convenience.
- 57. A-"selecting a vehicle program requirement from a library" is disclosed by Juran page 426 "Best in Class", and page 407 "data base".
- 58. C-"selecting an information database containing information related to the design of the vehicle from the library" is disclosed by Juran page 409 "critical aspects of construction and use of data bases". Also see page 408 "Tables of properties of materials" and "Tables of process capabilities".
- 59. E-"determining if the information from the information database correlates with the program requirement" is disclosed by Juran page 409 "critical aspects of construction and use of data bases".
- 60. F-"using the information from the information database in the design of the vehicle, if the information from the information database correlates with the program requirement" is disclosed by Juran page 409 "critical aspects of construction and use of data bases". Also see page 426 "Best in Class".

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61. Juran does not expressly disclose the 2 additional limitation.

- 62. B-"[library] stored in a memory of a computer system, where the library is accessed through an information portal on the computer system" is disclosed by Tucker at page 1954 "The World Wide Web (WWW) is the fastest-growing protocol on the Internet."
- 63. D-"wherein the information database is accessed through the information portal" is disclosed by Tucker at page 1954 "The World Wide Web (WWW) is the fastest-growing protocol on the Internet."
- 64. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use Tucker's "Internet" to modify Juran's quality methods in order to inexpensively store large amounts of data, and to allow instant and simultaneous access to the data from multiple computers (or "information portals").
- 65. <u>Claims 2-6 are rejected</u> under 35 U.S.C. 103(a) as being unpatentable over Juran in view of Tucker.
- 66. Claims 2-6 depend from claim 1, with the following additional limitations.
- 67. In claim 2, "selecting additional information for determining if the [additional] information from the information database correlates with the program requirement, if the information from the information database does not correlate with the program requirement" is disclosed by Juran page 409 "critical aspects of construction and use of data bases", and page 426 "Enlarge the planners' data base".
- 68. In claim 3, "determining if a portion of the information from the information database correlates with the program requirement based on the additional information" is disclosed by Juran page 409 "critical aspects of construction and use of data bases", and page 426 "Enlarge the planners' data base".
- 69. In claim 4, "using the portion of the information from the information database that correlates with the program requirement in the design of the vehicle, if a portion of the information from the information database correlates with the program requirement" is disclosed by Juran page 409 "critical aspects of construction and use of data bases", and page 426 "Best in Class".

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70. In claim 5, "selecting through the information portal additional information regarding the design of the vehicle" is disclosed by Juran page 409 "critical aspects of construction and use of data bases", and page 426 "Best in Class".

- 71. In claim 6, "using the additional information to determine whether to generate new information for use in the design of the vehicle and generating new information if determined that the new information should be generated" is disclosed by Juran page 409 "critical aspects of construction and use of data bases", and page 426 "Best in Class", and page 465 "Ford selected those vital few features which directly impacted the senses of these major customers".
- 72. The motivation for claims 2-6 is identical to the motivation for claim 1. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use Tucker's "Internet" to modify Juran's quality methods in order to inexpensively store large amounts of data, and to allow instant and simultaneous access to the data from multiple computers (or "information portals").
- 73. <u>Claim 7 is rejected</u> under 35 U.S.C. 103(a) as being unpatentable over Juran in view of Tucker.
- 74. Claim 7 is an independent "method" claim with 9 limitations, labeled A-I by the Examiner for convenience.
- 75. Note that claim 7 is almost identical to claim 6 above, except that claim 7 is expressly "web-based".
- 76. A-"selecting a vehicle program requirement from a library" is disclosed by Juran page 426 "Best in Class", and page 407 "data base".
- 77. C-"selecting an information database containing information related to the design of the vehicle from the library" is disclosed by Juran page 409 "critical aspects of construction and use of data bases". Also see page 408 "Tables of properties of materials" and "Tables of process capabilities".
- 78. E-"determining if the information from the information database correlates with the program requirement" is disclosed by Juran page 409 "critical aspects of construction and use of data bases".

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79. F-"using the information from the information database in the design of the vehicle, if the information from the information database correlates with the program requirement" is disclosed by Juran page 409 "critical aspects of construction and use of data bases". Also see page 426 "Best in Class".

- 80. G-"selecting through the information portal additional information for determining if the [additional] information from the information database correlates with the program requirement, if the information from the information database does not correlate with the program requirement" is disclosed by Juran page 409 "critical aspects of construction and use of data bases", and page 426 "Enlarge the planners' data base".
- 81. H-"determining if a portion of the information from the information database correlates with the program requirement based on the additional information" is disclosed by Juran page 409 "critical aspects of construction and use of data bases", and page 426 "Enlarge the planners' data base".
- 82. I-"using the portion of the information from the information database that correlates with the program requirement in the design of the vehicle, if a portion of the information from the information database correlates with the program requirement" is disclosed by Juran page 409 "critical aspects of construction and use of data bases", and page 426 "Best in Class".
- 83. Juran does not expressly disclose the 2 additional limitation.
- 84. B-"[library] stored in a memory of a computer system, wherein the library is accessed through a web-based information portal on the computer system" is disclosed by Tucker at page 1954 "The World Wide Web (WWW) is the fastest-growing protocol on the Internet."
- 85. D-"wherein the information database is accessed through the information portal" is disclosed by Tucker at page 1954 "The World Wide Web (WWW) is the fastest-growing protocol on the Internet."
- 86. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use Tucker's "Internet" to modify Juran's quality methods in order to inexpensively store large amounts of data, and to allow instant and simultaneous access to the data from multiple computers (or "information portals").
- 87. <u>Claims 8-9 are rejected</u> under 35 U.S.C. 103(a) as being unpatentable over Juran in view of Tucker.

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88. Claims 8-9 depend from claim 7, with the following additional limitations.

- 89. In claim 8, "selecting through the information portal additional information regarding the design of the vehicle" is disclosed by Juran page 409 "critical aspects of construction and use of data bases", and page 426 "Enlarge the planners' data base".
- 90. In claim 9, "using the additional information to determine whether to generate new information for use in the design of the vehicle and generating new information if determined that the new information should be generated" is disclosed by Juran page 409 "critical aspects of construction and use of data bases", and page 426 "Enlarge the planners' data base".
- 91. The motivation for claims 8-9 is identical to the motivation for claim 1. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use Tucker's "Internet" to modify Juran's quality methods in order to inexpensively store large amounts of data, and to allow instant and simultaneous access to the data from multiple computers (or "information portals").
- 92. <u>Claim 10 is rejected</u> under 35 U.S.C. 103(a) as being unpatentable over Juran in view of Tucker.
- 93. Claim 10 is an independent "method" claim with 12 limitations, labeled A-J by the Examiner for convenience.
- 94. Note that claim 10 is almost identical to claim above, except that claim 7 is expressly "web-based".
- 95. A-"selecting a vehicle program requirement from a library" is disclosed by Juran page 426 "Best in Class", and page 407 "data base".
- 96. C-"selecting an information database of verification information for the design of the vehicle" is disclosed by Juran page 409 "critical aspects of construction and use of data bases". Also see page 408 "Tables of properties of materials" and "Tables of process capabilities".
- 97. E-"determining if the verification information from the information database correlates with the program requirement" is disclosed by Juran page 409 "critical aspects of construction and use of data bases".

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98. F-"using the information from the information database in the design of the vehicle, if the verification information correlates with the program requirement" is disclosed by Juran page 409 "critical aspects of construction and use of data bases". Also see page 426 "Best in Class".

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- 99. G-"selecting through the information portal additional information regarding the design of the vehicle" is disclosed by Juran page 409 "critical aspects of construction and use of data bases", and page 426 "Enlarge the planners' data base".
- 100. H-"using the additional information to determine if a portion of the verification information correlates with the program requirement" is disclosed by Juran page 409 "critical aspects of construction and use of data bases", and page 426 "Enlarge the planners' data base".
- 101. I-"using the portion of the verification information that correlates with the program requirement if determined that a portion of the verification information correlates with the program requirement" is disclosed by Juran page 409 "critical aspects of construction and use of data bases", and page 426 "Enlarge the planners' data base".
- 102. J-"generating new information if a portion of the verification information does not correlate with the program requirement" is disclosed by Juran page 409 "critical aspects of construction and use of data bases", and page 426 "Enlarge the planners' data base".
- 103. Juran does not expressly disclose the 2 additional limitation.
- 104. B-"[library] stored in a memory of a computer system, wherein the library is accessed through a web-based information portal on the computer system" is disclosed by Tucker at page 1954 "The World Wide Web (WWW) is the fastest-growing protocol on the Internet."
- 105. D-"wherein the information database is accessed through the information portal" is disclosed by Tucker at page 1954 "The World Wide Web (WWW) is the fastest-growing protocol on the Internet."
- 106. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use Tucker's "Internet" to modify Juran's quality methods in order to inexpensively store large amounts of data, and to allow instant and simultaneous access to the data from multiple computers (or "information portals").

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107. <u>Claims 11-16 are rejected</u> under 35 U.S.C. 103(a) as being unpatentable over Juran in view of Tucker.

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- 108. Claims 11-16 depend from claim 10, with the following additional limitations.
- 109. In claim 11, "determining through the information portal if a condition is known by which the verification information was generated, if a portion of the verification information correlates with the program requirement" is disclosed by Juran page 409 "critical aspects of construction and use of data bases", and page 409 "scientific tools... Validity of conclusions... scientific approach" and page 426 "Enlarge the planners' data base".
- 110. In claim 12, "generating new verification information if the condition by which the verification information was generated is not known in the design of the vehicle" is disclosed by Juran page 409 "critical aspects of construction and use of data bases", and page 409 "scientific tools... Validity of conclusions... scientific approach" and page 426 "Enlarge the planners' data base".
- 111. In claim 13, "determining confidence in the portion of the verification information that correlates with the program requirement if the condition by which the verification information is generated is known" is disclosed by Juran page 409 "critical aspects of construction and use of data bases", and page 409 "scientific tools... Validity of conclusions... scientific approach" and page 426 "Enlarge the planners' data base".
- 112. In claim 14, "performing a computer-aided engineering analysis of the verification information if not confident in the verification information" is disclosed by Juran page 409 "critical aspects of construction and use of data bases", and page 409 "scientific tools... Validity of conclusions... scientific approach" and page 426 "Enlarge the planners' data base".
- 113. In claim 15, "using the portion of the verification information and the results of the computer aided engineering analysis in the design of the vehicle if confident in the computer-aided engineering analysis" is disclosed by Juran page 409 "critical aspects of construction and use of data bases", and page 409 "scientific tools... Validity of conclusions... scientific approach" and page 426 "Enlarge the planners' data base".
- 114. In claim 16, "using the portion of the verification information in the design of the vehicle if confident in the verification information" is disclosed by Juran page 409 "critical aspects

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of construction and use of data bases", and page 409 "scientific tools... Validity of conclusions... scientific approach" and page 426 "Enlarge the planners' data base".

of the invention, it would have been obvious to a person of ordinary skill in the art to use Tucker's "Internet" to modify Juran's quality methods in order to inexpensively store large amounts of data, and to allow instant and simultaneous access to the data from multiple computers (or "information portals").

FINAL OFFICE ACTION

116. THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

117. All claims are rejected.

Communication

Examiner should be directed to Eduardo Garcia-Otero whose telephone number is 703-305-0857. The examiner can normally be reached on Tuesday through Friday from 9:00 AM to 7:00 PM. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Kevin Teska, can be reached at (703) 305-9704. The fax phone number for this group is 703-872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist, whose telephone number is (703) 305-3900.

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